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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,688	11/26/2003	Peter Gaal	030153	8929
23696 7590 07/23/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER ELCENKO, ERIC J				
ART UNIT 2617		PAPER NUMBER		
NOTIFICATION DATE 07/23/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/723,688

**Applicant(s)**

GAAL ET AL.

**Examiner**

ERIC ELCENKO

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 May 2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 and 37-42 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-31 and 37-42 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

***Response to Arguments***

1. Applicant's arguments have been fully considered but they are not persuasive. The applicant argues the combination does not teach the first and second sub-codes restricted to lower data-rate transmissions as compared to the first code. The examiner disagrees. As described in the rejection below and discussed in previous arguments, a code tree as seen in Fig. 5 of the applicant's specification and Fig. 2 of Lindskog includes variable rates in the code tree. If a code is allocated a code derived from the first code, a sub-code, will, to one of ordinary skill in the art, be of a lower transmission rate. This is the basic functionality of a code tree is the breakdown of the branches in an orthogonal nature to the codes above and below the code in question and its place in the code tree. A code can only remain orthogonal if the codes not related to the above code is used which means the code will support a lower transmission rate. A code tree and its structure is obvious to one of ordinary skill in the art. The examiner also notes the word restricted as in the current claim limitation also leads into the obviousness of the structure of a code tree as a higher code cannot be used to keep the codes orthogonal and lower transmission code lengths will have to be used. (Lindskog Para 26-32) The combination of the Joshi reference as set forth below and in previous actions is to teach the allocation/assignment of a second channel to a single mobile station.

**Claim Rejections - 35 USC § 103**

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, 14-24, 37, 39 and 41-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog (U.S. Pub. No. 2006/0120322) in view of Joshi et al. (U.S. Pub. No. 2002/0160782)

In regard to Claims 1, 19, 37, 39 and 42, Claim 1 being an associated method claim of an apparatus claims 19 and 37, Lindskog teaches allocating a first code to a first subscriber station, *(A request comes in for allocation of channel resources, and a specific channel resources is allocated, Abs)* assigning a first sub-code derived from the first code to support a dedicated channel to the first subscriber station, *(depending upon the rate needed, a code is broken down as shown in Fig. 2 into smaller sub-codes of the larger code to maximize the resources available., Para 25-27)* It is reasonable for one of ordinary skill in the art to assume this process can be done for multiple mobile stations for assigning a second code to support a dedicated channel to the second subscriber station. *(depending upon the rate needed, a code is broken down as shown in Fig 2 into smaller sub-codes of the larger code to maximize resources available, Para 25-27)* wherein the first and second sub-codes are restricted to lower data-rate transmissions as compared to the first code. *(depending on the rate, a code is broken*

*down as shown in Fig. 2 as described in the current applications specification into a code tree of multiple rates. Linskog teaches sub-codes being restricted to a lower data-rate transmission as compared to the main code as they are derivatives of the larger full rate code, Para 25-27)*

Linskog does not teach assigning a second sub-code derived from the first code to support a supplemental channel to the second subscriber station. (*Specifically assigning a second channel to a single mobile station*)

Joshi teaches multiple assigned channels to a single mobile station including up to seven additional supplemental channel wherein the supplemental channels are operated at a different data rate than the first channel. (Para 29-31) Linskog teaches when assigning a code to a channel the codes not used in the allocation to the first channel are available for future allocation to provide other channels. It is obvious to one of ordinary skill in the art at the time of the invention if the additional supplemental channel was not able to be allocated to the same code as the dedicated channel assigned to the second mobile station from a limitation of available space, the additional space from another code would be used to support the supplemental channel.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Linskog to include the teaching of Joshi as described above. One of ordinary skill in the art could have combined the known prior art elements using known techniques to yield predictable results to one of ordinary skill in the art.

In regard to Claims 2 and 20, Joshi teaches assigning a third sub-code derived from the first code to support a second supplemental channel to the second subscriber

station. *(Joshi teaches assigning up to seven additional supplemental channels, Para 3—31) As discussed above the additional space from a channel could be used to support other channels from a first code. (Para 27,29 , 36 and 43)*

In regard to Claims 3 and 21, it is obvious to one of ordinary skill in the art that that in a communication system at any time there can be a mobile in soft hand off and one not in soft handoff. There can also be none in soft handoff. The allocation of a code to a mobile in soft-hand off would only constitute holding the resource in the first cell for additional time. (Para 65)

In regard to Claims 4 and 22, Linskog teaches separating communications to the second subscriber station into first and second portions. Spreading the first portion of the communication with the second code and spreading the second portion of the communications with the second sub-code. *(spreading codes are assigned to a forward-link connections from a first set of orthogonal odes as long as there are codes available in the first set. When no more codes are available, codes from a second set Are assigned. Para 4)*

In regard to Claims 5 and 23, Linskog teaches he first sub-code comprises a plurality of concatenated copies of the first code. (Para 28)

In regard to Claims 6 and 24, Linskog teaches signaling to the second subscriber the first code. (Para 27-30)

In regard to Claims 14 and 41, Linskog teaches receiving information from a base station comprising a first code, *(A request comes in for allocation of channel resources, and a specific channel resources is allocated, Abs)* searching through the

first code to locate a sub-code, *(depending upon the rate needed, a code is broken down as shown in Fig. 2 into smaller sub-codes of the larger code to maximize the resources available., Para 25-27)* dispreading a dedicated channel fro the base station with a second code, *(It is reasonable for one of ordinary skill in the art to assume this process can be done for multiple mobile stations for assigning a second code to support a dedicated channel to the second subscriber station. (depending upon the rate needed, a code is broken down as shown in Fig 2 into smaller sub-codes of the larger code to maximize resources available, Para 25-27)* wherein the first and second sub-codes are restricted to lower data-rate transmissions as compared to the first code. *(depending on the rate, a code is broken down as shown in Fig. 2 as described in the current applications specification into a code tree of multiple rates. Linskog teaches sub-codes being restricted to a lower data-rate transmission as compared to the main code as they are derivatives of the larger full rate code, Para 25-27)*

Linskog does not teach dispreading a supplemental channel with a sub-code and communicating on the dedicated and supplemental channels.

Joshi teaches multiple assigned channels to a single mobile station including up to seven additional supplemental channels wherein the supplemental channels are operated at a different data rate than the first channel. (Para 29-31) Linskog teaches when assigning a code to a channel the codes not used in the allocation to the first channel are available for future allocation to provide other channels. It is obvious to one of ordinary skill in the art at the time of the invention if the additional supplemental channel was not able to be allocated to the same code as the dedicated channel

assigned to the mobile station from a limitation of available space, the additional space from another code would be used to support the supplemental channel.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lindskog to include the teaching of Joshi as described above. One of ordinary skill in the art could have combined the known prior art elements using known techniques to yield predictable results to one of ordinary skill in the art.

In regard to Claims 15 and 16, Lindskog teaches wherein the information comprises a plurality of codes including the first code and the first code containing the sub-code. (Para 28)

In regard to Claims 17 and 18, Lindskog teaches wherein the information is carried on the dedicate channel. (*dedicated channel is used for communication between the base station and the mobile station, Fig. 1, Para 28*)

3. Claims 7, 25, 38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindskog (U.S. Pub. No. 2006/0120322) in view of Scherzer et al. (U.S. Pub. No. 6,901,062)

In regard to Claims 7, 25, 38 and 40 Claim 7 being the method claim of apparatus claims 25, Lindskog teaches allocating a different first code from a plurality of orthogonal codes to each of the subscriber stations; (*A request comes in for allocation of channel resources, and a specific channel resources is allocated, Abs.*) assigning each subscriber station either its first allocated code or a first sub-code derived from its allocated first code to support a dedicated channel, (*It is reasonable for one of ordinary*



*skill in the art to assume this process can be done for multiple mobile stations for assigning a second code to support a dedicated channel to the second subscriber station, Para 25-27) assigning a second sub-code derived from one of the first codes to support a communications channel to one of the subscriber stations. (Lindskog teaches when assigning a code to a channel the codes not used in the allocation to the first channel are available for future allocation to provide other channels. Para 28) wherein the first and second sub-codes are restricted to lower data-rate transmissions as compared to the first code. (depending on the rate, a code is broken down as shown in Fig. 2 as described in the current applications specification into a code tree of multiple rates. Lindskog teaches sub-codes being restricted to a lower data-rate transmission as compared to the main code as they are derivatives of the larger full rate code, Para 25-27)*

Lindskog does not teach separating a plurality of mobile stations into groups.

Scherzer teaches grouping the subscriber stations in a number of groups (e.g., M groups) and allocating resources to subscriber stations in groups. (Col 9, Ln 33-55)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lindskog to include the teaching of Scherzer in order for a larger number of subscriber stations to be handled and provide more efficient server while taking into a larger group of connections rather than a single mobile stations.

4. Claims 8-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination as applied to claim 7 above, and further in view of Joshi et al. (U.S. Pub. No. 2002/0160782)

In regard to Claims 8 and 26, Lindskog teaches assigning a second code to support a dedicated channel to said one of the subscriber stations in the second group, *(It is reasonable for one of ordinary skill in the art to assume this process can be done for multiple mobile stations for assigning a second code to support a dedicated channel to the second subscriber station. (depending upon the rate needed, a code is broken down as shown in Fig 2 into smaller sub-codes of the larger code to maximize resources available, Para 25-27)*

Lindskog does not teach assigning a second sub-code derived from the first code to support a supplemental channel to the second subscriber station. (Assigning a second channel to a single mobile station)

Joshi teaches multiple assigned channels to a single mobile station including up to seven additional supplemental channel wherein the supplemental channels are operated at a different data rate than the first channel. (Para 29-31) Lindskog teaches when assigning a code to a channel the codes not used in the allocation to the first channel are available for future allocation to provide other channels. It is obvious to one of ordinary skill in the art at the time of the invention if the additional supplemental channel was not able to be allocated to the same code as the dedicated channel assigned to the second mobile station from a limitation of available space, the additional space from another code would be used to support the supplemental channel.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lindskog to include the teaching of Joshi as described above. One of ordinary skill in the art could have combined the known prior art elements using known techniques to yield predictable results to one of ordinary skill in the art.

In regard to Claims 9 and 27, Lindskog teaches separating communications to the second subscriber station into first and second portions. Spreading the first portion of the communication with the second code and spreading the second portion of the communications with the second sub-code. *(spreading codes are assigned to a forward-link connections from a first set of orthogonal codes as long as there are codes available in the first set. When no more codes are available, codes from a second set are assigned. Para 4)*

In regard to Claims 10 and 28, Joshi teaches assigning a third sub-code derived from the first code to support a second supplemental channel to the second subscriber station. *(Joshi teaches assigning up to seven additional supplemental channels, Para 3—31) As discussed above the additional space from a channel could be used to support other channels from a first code. (Para 27, 29, 36 and 43)*

In regard to Claims 11 and 29, it is obvious to one of ordinary skill in the art that in a communication system at any time there can be a mobile in soft hand off and one not in soft handoff. There can also be none in soft handoff. The allocation of a code to a mobile in soft-hand off would only constitute holding the resource in the first cell for additional time. (Para 65)

In regard to Claims 12 and 30, Lindskog teaches the first sub-code comprises a plurality of concatenated copies of the first code. (Para 28)

In regard to Claims 13 and 31, Lindskog teaches signaling to the second subscriber the first code. (Para 27-30)

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC ELCENKO whose telephone number is (571)272-8066. The examiner can normally be reached on M-F 7:30 AM through 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric Elcenko/

/NICK CORSARO/  
Supervisory Patent Examiner, Art Unit 2617